PMA 2132 QUANTUM LIGHT DETECTOR

SENSORS
INDUSTRIAL LIGHT MEASUREMENT
LABORATORY LIGHT MEASUREMENT

Delivery on all products is Stock to 2 weeks.

Every product is calibrated to NIST traceable standards before shipment.

The PMA 2132 Quantum light detector(PAR)measures the photon flux in wavelength range from 400 to 700 nm.
The PMA2132 Quantum light(PAR)detector has an optional water-proof enclosure so that it can operate outdoors or in a damp environment. If the sensor is required to operate under water up to 3 meters depth, then our weatherproof option should be used. There is a proportional relationship between the number of photons absorbed in 400 to 700 nm band and the rate of photosynthesis in plants.

The energy of a photon is proportional to its frequency and therefore inversely proportional to wavelength. In order to produce a signal proportional to the photon flux (number of photons per unit of area per second) the detector's spectral power response (Amps/[W/cm^2]) must be inversely proportional to the photon's frequency and thus proportional to wavelength. Traditionally the quantum flux is measured in micro-moles (micro-Einsteins)/s/m^2. The conversion factor is:

1µE/s/m^2 = 1µmole/s/m^2 = 6.02*10^{17} quanta/s/m^2

The angular response of the PMA2132 detector is cosine corrected and suitable for measurements of diffuse radiation or radiation from extended sources.

Uses

Measures light in the Photosynthetically Active Range of the spectrum and can be used in Agriculture, Climatology, Meteorology and Photobiology

Alternate Views

Applications

Agriculture
Photobiology
Educational
Meteorology and climatology
Environmental monitoring

Features

High sensitivity
Wide dynamic range
Excellent long term stability
Cosine corrected
NIST traceable calibration
Hermetic enclosure

Specifications

Spectral response:

Quantum response (400-700nm) Figure 1

Angular response:

5% for angles <80°

Range 20,000 uEinsteins/second/m2

Display resolution: 0.1 uEinsteins/second/m2 Operating environment: -40 to 120°F (-40 to +50°C) outdoors

Temperature coefficient:

<0.15%/°C

Cable:

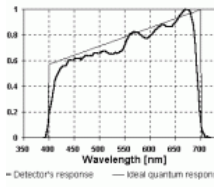
50ft (15m) Diameter 1.6" (40.6 mm)

Height:

1.8" (45.8 mm)

Weight:

7.1 oz. (200 grams)



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